

*DC*

#10



PCT

ENTERED

**RAW SEQUENCE LISTING**  
 PATENT APPLICATION: US/10/049,321

DATE: 06/18/2003  
 TIME: 15:12:55

Input Set : A:\P02379US0.txt  
 Output Set: N:\CRF4\06182003\J049321.raw

```

3 <110> APPLICANT: Charles, Ian G.
4      Xu, Weiming
5      Liu, Lizhi
7 <120> TITLE OF INVENTION: Microencapsulated Nitric Oxide Synthase Source
9 <130> FILE REFERENCE: HO-P02379US0
11 <140> CURRENT APPLICATION NUMBER: US 10/049,321
12 <141> CURRENT FILING DATE: 2002-02-11
14 <150> PRIOR APPLICATION NUMBER: GB 9918077
15 <151> PRIOR FILING DATE: 1999-07-30
17 <150> PRIOR APPLICATION NUMBER: GB 0016171.1
18 <151> PRIOR FILING DATE: 2000-06-30
20 <160> NUMBER OF SEQ ID NOS: 5
22 <170> SOFTWARE: PatentIn version 3.1
24 <210> SEQ ID NO: 1
25 <211> LENGTH: 11
26 <212> TYPE: PRT
27 <213> ORGANISM: Artificial Sequence
29 <220> FEATURE:
30 <223> OTHER INFORMATION: C-terminal residues of human iNOS
32 <220> FEATURE:
33 <221> NAME/KEY: MOD_RES
34 <222> LOCATION: (4)..(4)
35 <223> OTHER INFORMATION: Orn
38 <220> FEATURE:
39 <221> NAME/KEY: MOD_RES
40 <222> LOCATION: (3)..(3)
41 <223> OTHER INFORMATION: Nle
44 <220> FEATURE:
45 <221> NAME/KEY: MISC_FEATURE
46 <222> LOCATION: (1)..(11)
47 <223> OTHER INFORMATION: X = Modified Residues
50 <400> SEQUENCE: 1
W--> 52 Cys Arg Xaa Xaa Ser Leu Glu Met Ser Ala Leu
53 1           5           10
56 <210> SEQ ID NO: 2
57 <211> LENGTH: 19
58 <212> TYPE: DNA
59 <213> ORGANISM: BACTERIA
61 <400> SEQUENCE: 2
62 tcccttatcag tgatagaga
65 <210> SEQ ID NO: 3
66 <211> LENGTH: 4164
67 <212> TYPE: DNA

```

19

**RAW SEQUENCE LISTING**  
**PATENT APPLICATION: US/10/049,321**

**DATE: 06/18/2003**  
**TIME: 15:12:55**

**Input Set : A:\P02379US0.txt**  
**Output Set: N:\CRF4\06182003\J049321.raw**

68 <213> ORGANISM: human  
70 <400> SEQUENCE: 3  
71 agagaactca gcctcattcc tgctttaaaaa tctctggcc acctttgatg aggggactgg 60  
73 gcagttctag acagtccga agttctcaag gcacaggctctt cttcctgggt tgactgtct 120  
75 taccccgggg aggcaagtgc gcccagtcgca agccccacag tgaagaacat ctgagctcaa 180  
77 atccagataa gtgacataag tgacctgctt tgtaaaagcca tagagatggc ctgtccttgg 240  
79 aaatttctgt tcaagaccaa attccaccag tatgcaatga atggggaaa agacatcaac 300  
81 aacaatgtgg agaaaagcccc ctgtgccacc tccagtgccag tgacacagga tgaccttcag 360  
83 ttcacaacc tcagcaagca gcagaatgag tccccgcagc ccctcgtgga gacgggaaag 420  
85 aagtctccag aatctctggt caagctggat gcaaccccat tgcctccccc acggcatgtg 480  
87 aggatcaaaa actggggcag cgggatgact ttccaagaca cacttcacca taaggccaaa 540  
89 ggattttaa cttgcaggc caaatcttcg ctggggtcca ttatgactcc caaaagttg 600  
91 accagaggac ccaggacaa gcctaccctt ccagatgagc ttctacctca agctatcgaa 660  
93 ttgtcaacc aatattacgg ctccctcaaa gaggcaaaaa tagaggaaca tctggccagg 720  
95 gtggaaagcg taacaaagga gatagaaaaca acaggaacctt accaactgac gggagatgag 780  
97 ctcatcttcg ccaccaagca ggcctggcgc aatgccccac gctgcattgg gaggatccag 840  
99 tggtccaacc tgcagtgctt cgatgcccgc agctgttcca ctgcccgggaa aatgtttgaa 900  
101 cacatctgca gacacgtcg ttactccacc aacaatggca acatcaggc ggcacatcacc 960  
103 gtgttccccc agcggagtga tggcaagcac gacttccggg tgtggaatgc tcagtcatc 1020  
105 cgctatgtcg gctaccagat gccagatggc agcatcagag gggaccctgc caacgtggaa 1080  
107 ttcactcagc tgcacatcga cctgggtctt aagcccaagt acggccgctt cgatgtggc 1140  
109 cccctggtcc tgcaggccaa tggccgtgac cctgagctct tcgaaatccc acctgacctt 1200  
111 gtgcgttggg tggccatgga acatccaaa tacagtggtt ttcgggaaactt ggagctaaag 1260  
113 tggtagccccc tgcctgcgtt ggccaaatcg ctgcttgagg tggccggcctt ggagttccca 1320  
115 gggtagccct tcaatggctg gtacatggc acagagatcg gagtccgggaa cttctgtgac 1380  
117 gtccagcgct acaacatcctt ggaggaagtgg ggcaggagaa tggcccttggg aacgcacaag 1440  
119 ctggcctcgc tctggaaaga ccaggctgtc gttgagatca acattgtctgt gctccatagt 1500  
121 ttccagaagc agaatgtgac catcatggac caccactcggtt ctgcagaatc cttcatgaag 1560  
123 tacatgcaga atgaataccg gtccctggg qgctccggg cagactggat ttggctggc 1620  
125 ccccccattgt ctgggagcat cacccttgc tttcaccagg agatgctgaa ctacgtcctg 1680  
127 tcccctttctt actactatca ggtagagcc tggaaaaccc atgtctggca ggacgagaag 1740  
129 cggagaccca agagaagaga gattccatttgg aaagtcttgg tcaaagctgt gctctttgcc 1800  
131 tggatgtcgta tgcgcagac aatggcgcc cggatcgatg tcaccatcctt ctttgcgaca 1860  
133 gagacaggaa aatcagaggc gctggctgg gacctggggg ctttatttcg ctgtgccttc 1920  
135 aaccccaagg ttgtctgcattt ggataagtttgg aggttggatgctt gcttggagga ggaacggctg 1980  
137 ctgttgggttgg tggccatgttgg gggactgccc ctggcaatgg agagaaactg 2040  
139 aagaaatcgc tcttcattgtt gaaagagctc aacaacaaat tcaaggatcg tttttttggc 2100  
141 ctccgctcca gcatgttaccc tcgggttctgc gcctttgtctt atgacattga tcagaagctg 2160  
143 tcccacctgg gggcccttc gctcacccttgg atgggagaag gggatggatgctt cagttggc 2220  
145 gaggacgcct tccgcagtcg ggccgtgcaaa accttcaagg cagcctgtga gacgtttgtat 2280  
147 gtccgaggca aacagcacat tcaagatcccc aagctctaca cctccaaatgtt gacccctgggac 2340  
149 ccgcaccactt acaggctgtt gcaaggactca cagcccttgg acctcagcaa agccctcagc 2400  
151 agcatgtcgta ccaagaacatgtt gttcaccatgtt aggttcaaat ctggccagaa tctacaaatgt 2460  
153 ccgcacatcca gccgtgccac catcctgggtt gaaactctcctt gtgaggatgg ccaaggccctg 2520  
155 aactacctgc cggggggagca ctttgggtt tgcccaggca accagccggc cctggccaa 2580  
157 ggtatcctgg agcgagtggtt ggatggccccc acaccccaacc agacagtgcg cctggaggcc 2640  
159 ctggatgaga gtggcagcta ctgggtcagt gacaagaggc tggcccttcgtt ctcactcagc 2700  
161 caggccctca cctacttcctt ggacatcacc acaccccaacc cccagctgtt gctccaaaag 2760  
163 ctggcccttca tggccacaga agacgcctgag agacagaggc tggaggccctt gtgcccggcc 2820

**RAW SEQUENCE LISTING**  
**PATENT APPLICATION: US/10/049,321**

**DATE: 06/18/2003**  
**TIME: 15:12:55**

**Input Set : A:\P02379US0.txt**  
**Output Set: N:\CRF4\06182003\J049321.raw**

165	tcagagtaca gcaagtggaa gttcaccaac agccccat tcctggagggt gctagaggag	2880
167	ttcccgccc tgccgggtgtc tgctggcttc ctgcttccc agctcccat tctgaagccc	2940
169	aggttctact ccatcagctc ctcgggat cacacgccc cagagatcca cctgactgtg	3000
171	gccgtggta cctaccacac ccgagatggc cagggtcccc tgccaccacgg cgtctgcagc	3060
173	acatggctca acaggctgaa gccccaaagac ccagtgcctt gctttgtgcg gaatgccagc	3120
175	ggcttccacc tccccgagga tccctccat ccttgcatcc tcatcgggcc tggcacaggc	3180
177	atcgccctt tccgcagtt ctggcagcaa cggtccatg actcccagca caagggagtg	3240
179	cggggaggcc gcatgacatt ggtgtttggg tgccgcgc cagatgagga ccacatctac	3300
181	caggaggaga tgctggagat gggccagaag ggggtctgc atgcgggtgca cacagcctat	3360
183	tccgcctgc ctggcaagcc caaggtctat gttcaggaca tcctgcggca gcagctggcc	3420
185	agcgagggtgc tccgtgtct ccacaaggag ccaggccacc tctatgtttg cggggatgtg	3480
187	cgcattggccc gggacgtggc ccacaccctg aagcagctgg tggctgcca gctgaaattg	3540
189	aatgaggagc aggtcgagga ctatttctt cagctcaaga gccagaagcg ctatcacgaa	3600
191	gatatcttg gtgtgttatt tccttacag gcaagaagg acagggtggc ggtgcagccc	3660
193	agcgcctgg agatgtcagc gctctgaggg cctacaggag ggttaaagc tgccgcaca	3720
195	gaacttaagg atggagccag ctctgcattt tctgaggtca cagggcctgg ggagatggag	3780
197	gaaagtgata tcccccaagc tcaagtctt tttcctcaac gttgctcccc atcaagccct	3840
199	ttacttgacc tcctaacaag tagcaccctg gattgatcgg agcctccctt ctc当地actgg	3900
201	ggcctccctg gtccttggc gacaaaatct taaatgccag gcctggcaag tgggtgaaag	3960
203	atggaaacttg ctgctgagtg caccacttca agtgcaccacc aggagggtgtc atgcaccac	4020
205	tgtgtattta actgccttgt gtacagttat ttatgcctt gtataaaaa aactaacacc	4080
207	cagtctttc cccatggca cttgggttcc cccctgtatga ttcccttgatg gagatattt	4140
209	catgaattgc attttacttt aatc	4164
212	<210> SEQ ID NO: 4	
213	<211> LENGTH: 7124	
214	<212> TYPE: DNA	
215	<213> ORGANISM: human	
217	<400> SEQUENCE: 4	
218	agagcggctc ttttaatgag gtttgcgacg tctccctccc cacacccata aaccagtcgg	60
220	gttggacgtc actgctaatt cgtttcaatg atgataggat aaaggaggaa catataagaaa	120
222	taaattcccc ctcacgaccc tcgctgagct cacggctcag tccctacata tttatgccgc	180
224	gttccagcc gctgggttag gagctactt agcggccggc tcctccgagg ggccggccgg	240
226	cagcggcggc cggccggc gacgggctca tggatgcctca gatctgatcc gcatctaaca	300
228	ggctggcaat gaagataccc agagaatagt tcacatctat catgcgtcac ttctagacac	360
230	agccatcaga cgcacatctt cccctttctg cctgacctt ggacacgtcc caccgcctct	420
232	tttgacgtct gcctggtaa ccatcaactt ctttagagaat aaggagagag gcgatgcag	480
234	gaaatcatgc caccggacggg ccaccggcca tggatgggtg acgctgagct gacgtcaaag	540
236	acagagaggg ctgaaggcctt gtcagcacct gtcaccccggtt ctcctgcctt ccgtgttagcc	600
238	tgaaggcctgg atcctcctgg tggaaatcatc ttgcctgtat agcattgtga ggttccatg	660
240	caggaccctt cggaaagctt ttaccatgg aatgcacatg ttccgtgttc agcaaatcca	720
242	gccccatgtc atttctgttc gtctttca ggcggaaatggggccctgg gatttctgg	780
244	gaaggagccg gtcagtaagc cggccgtgtat catctctgac ctgattgtg gggccggccgc	840
246	agagcagatg ggcctcatcc agggccggaga catcattttt ggggtcaacg gccggccctt	900
248	ggtggacccgt agctatgaca ggcggccgtt ggtactcaga ggcattgcct ctgagaccca	960
250	cgtggcttc attctgaggg gcccgttgcagg tttaccacg caccgtggaga ccacctttac	1020
252	agggtgtggg acccccaaga ccatccgggt gacacagccc ctgggtcccc ccaccaaagc	1080
254	cgtggatctg tccccaccacg caccggccgg caaagaacag cccctggcag tggatggggc	1140
256	ctcggttccc gggaaatgggc ctcagcatgc ctacgatgtt gggcaggagg ctggctact	1200
258	cccccatgcc aacggccctgg ccccccagccccc cccaggccag gaccccgccga agaaagcaac	1260

**RAW SEQUENCE LISTING**  
**PATENT APPLICATION: US/10/049,321**

**DATE: 06/18/2003**  
**TIME: 15:12:55**

**Input Set : A:\P02379US0.txt**  
**Output Set: N:\CRF4\06182003\J049321.raw**

260	cagagtca	ctccaaggca	gaggggagaa	caatgaactg	ctcaaggaga	taggcctgt	1320
262	gctgac	ctcaccagt	ggagcagagg	ggtaaggga	ggggcac	ccaaaggcaga	1380
264	gatgaa	atgggaaatcc	agg	ttggacag	atgttggac	ggcaagt	1440
266	ccccctcg	gtggagaac	acc	gatctt	caatgac	cttgc	1500
268	tgtcg	ccat	attcagagaa	ggagcag	cccac	ctcag	1560
270	ccccaca	aatggcag	cctccaa	gt	tccacg	ctcaagg	1620
272	gactgagg	gttct	act	acacc	ccttaa	acattggaa	1680
274	tgagtac	atc	tgcatgg	ccat	catg	catgcaag	1740
276	cgtccgc	aca	aaaggac	tcttcc	cgccaa	tttattgatc	1800
278	atcaatt	aa	agatttg	ccaaag	catgg	ctggaaagg	1860
280	gatcgac	act	act	accag	ggac	ctcatctat	1920
282	cgcc	aatgc	ctgc	gtgtgt	caggat	tggccaag	1980
284	cgatgccc	gt	actgcac	cggcccac	gtgttca	tacatctg	2040
286	gtatgcc	aaca	agg	ac	tcc	tgccat	2100
288	cg	gcaag	cac	gacttcc	gag	tctggaa	2160
290	gcctgac	ggc	tcc	acc	cttgg	ccatc	2220
292	ca	gggg	cttgg	aaaccgc	gagg	ccatc	2280
294	cg	gaatg	cac	tcc	gat	gtgttgg	2340
296	gcac	ccc	aa	tgtgt	tc	tttgc	2400
298	gtcc	aa	atc	tcc	tttgc	ggat	2460
300	gtacat	gg	ac	agat	gtgtcc	tttgc	2520
302	gg	gag	aa	gt	tc	tttgc	2580
304	ccagg	cg	gt	ggagat	ca	tttgc	2640
306	catt	gtt	gt	atc	cc	tttgc	2700
308	ctg	ccgg	gg	cttgc	cc	tttgc	2760
310	cac	cc	tttgc	cc	cc	tttgc	2820
312	gcctg	atc	tttgc	cc	cc	tttgc	2880
314	agccat	cg	tttgc	cc	cc	tttgc	2940
316	gtctat	gg	aa	gggt	cc	tttgc	3000
318	agcttat	gg	aa	gg	cc	tttgc	3060
320	catg	gg	aa	tttgc	cc	tttgc	3120
322	cac	tttgc	aa	at	tttgc	cc	3180
324	aatgagg	cc	tttgc	cc	cc	tttgc	3240
326	cgtct	cc	tttgc	cc	cc	tttgc	3300
328	ctt	gag	gt	ggac	cc	tttgc	3360
330	agcata	cc	tttgc	cc	cc	tttgc	3420
332	agg	gg	atc	tttgc	cc	tttgc	3480
334	caggac	tttgc	gg	tttgc	cc	tttgc	3540
336	tgtca	tttgc	gg	tttgc	cc	tttgc	3600
338	caagtt	cc	tttgc	gg	cc	tttgc	3660
340	ccaca	aa	gg	tttgc	cc	tttgc	3720
342	atcc	gg	tttgc	cc	cc	tttgc	3780
344	ccag	cc	tttgc	gg	cc	tttgc	3840
346	gatc	gg	tttgc	gg	cc	tttgc	3900
348	ggagc	gg	tttgc	gg	cc	tttgc	3960
350	ctg	cc	tttgc	gg	cc	tttgc	4020
352	gcag	cc	tttgc	gg	cc	tttgc	4080
354	cctc	cc	tttgc	gg	cc	tttgc	4140
356	ggagg	cc	tttgc	gg	cc	tttgc	4200

**RAW SEQUENCE LISTING**  
**PATENT APPLICATION:** US/10/049,321

**DATE:** 06/18/2003  
**TIME:** 15:12:55

**Input Set : A:\P02379US0.txt**  
**Output Set: N:\CRF4\06182003\J049321.raw**

358	gtccctgctg cagccccgct actattccat cagctcctcc ccagacatgt accctgatga	4260
360	agtgcaccc tcgtggca tcgttccca ccgcactcga gatggagaag gaccaattca	4320
362	ccacggcgta tgctcctcct ggctcaaccg gatacaggct gacgaactgg tcccctgttt	4380
364	cgtgagagga gcacccagct tccacctgcc ccggaaacccc caagtccct gcacccctgt	4440
366	tggaccaggc accggcattt ccccttccg aagcttctgg caacagcggc aatttgatat	4500
368	ccaacacaaa ggaatgaacc cctgccccat ggtcctggc ttcgggtgcc ggaatccaa	4560
370	gatacatat atctacaggg aagagaccct gcaggccaag aacaaggggg tcttcagaga	4620
372	gctgtacacg gcttactccc gggagccaga caaacccaaag aagtacgtgc aggacatcct	4680
374	gcaggagcag ctggcgaggt ctgttaccc agccctgaag gagcaagggg gccacatata	4740
376	cgtctgtggg gacgtcacca tggctgctga tgtcctcaaa gccatccagc gcatcatgac	4800
378	ccagcagggg aagctctcg gagggacgc cggcgattt atcagccgga tgagggatga	4860
380	caaccgatac catgaggata ttttggagt caccctgcga acgtacgaag tgaccaaccg	4920
382	ccttagatct gagtccattt ctttcatttga agagagcaaa aaagacacccg atgaggttt	4980
384	cagctctaa ctggaccctc ttgcccagcc ggctgcaagt tttgtaaagcg cggacagaca	5040
386	ctgctgaacc tttccctcg gacccctgtt ggcctcgct ctgcctcctg tccttgcgc	5100
388	tgtgcctgg tttccctctt cgggcttctc gcccctcagt ggttcctcg gcccctctgg	5160
390	gttactctt tgagtttcc tgctgcgtat caatgtttt ctaatctgca gtgctctta	5220
392	caaaaactctg ttcccactcc ctcttttgc gacaaggga actcacgggt gcatgaaacc	5280
394	actggaacat ggccgtcgct gtgggggttt ttttctcg ggttccctg gaaaggctgc	5340
396	aggaactagg cacaagctct ctgagccagt ccctcagcca ctgaagttcc ctttctctt	5400
398	tttttatgt gacattttgg ttgtcggtgc ctgtgtgtgt gtgtgtgtgt gtgtgtgtgt	5460
400	gtgtgatggg ccaggctctt gtccgtccctt ttccctgcac aagtgtgtcg atcttagatt	5520
402	gccactgctt tcattgaaga ccctcaatgc caagaaacgt gtcctggcc catattaatc	5580
404	cctcggtgt ccataattttag ggtccacgcc catgtacctg aaacatttgg aagccccata	5640
406	attgttcttag tttagaaaggg tttagggcat ggggagagga gtggaaatt gattaaagg	5700
408	gtgtctccc aatgaaagag gcattcccg aatttgcgtc atttagatt tgataccagt	5760
410	gagcagagcc ctcatgtgac atgaacccat ccaatggatt gtcaaattcc cttccccc	5820
412	cccacccata ccagctagaa tcacttgcact ttgccacatc cattgactga cccctcctc	5880
414	cagcaatagc atccaagggg ccttggaaatggtt atgttgttca aagaagcctg gtggcaataa	5940
416	ggatcttccc actttgccac tggatgactt tggatgggtc acttgcctc agttttcct	6000
418	agtctataatg tcatacgaac ctaaagaata tgaatggatt aaatgttaaa gtttgggtgc	6060
420	ctggaaacaa tatcaagtaa caatatgatt attatttttt tattccccc aagcgggctt	6120
422	gtgtcttac ctttgggat gaaataatgg aagctggatca aagtggatga gttggaaag	6180
424	atgtgccata atgaggtccc acgtggcttc ttgcataggc gccacaactt ggggtggaa	6240
426	gaacttgcctt ctcaggctt tggccctctg cagttgtatct ccaaagttt aaacctgtt	6300
428	attaaatttt gacaataaag ttaccctcaa ctcagatcaa aaatggcag ccaagtctc	6360
430	gtttaggaatt ggagccgtg taattccctcc ctaagaggca acctgttgcattttactct	6420
432	cagagtaat ggtggaaagg gatccctttt tataactttt taaataactac aaatttagtgc	6480
434	caggcagttc ccagaaagag acaagaatc ctgtggctt cccagactgc agggccccca	6540
436	aggatggaaa gggatgttc tgctggatcc accctgttgc ttgtgtcttgc tatacagaa	6600
438	aaaccacatt tctttatatt actgtacgtt ggcataatctt gttgttgcgt ttgggtgtct	6660
440	gctaaagagg aagtgcactg gcccctttt aaaggctttt acagtggggg caccaagacc	6720
442	ccaaaggccc aggcaggag actgttaaag taaaaggca atctatgact caccttgc	6780
444	tgcctatccctt ggcagcccccc accgggtgtcc tggccctgc acatggatct tgacttcatg	6840
446	ccagctataa tctccctgc tttccctttaa tcccaatttc ccctgctcac tcttccacag	6900
448	atataaagaa caaacactta gcatccacca ctcacccctt ctaatctgaa agggaaagccc	6960
450	attctaaact ctttcctgc aaacccattt ccagctccta gtagcttcc tcccaaaggc	7020
452	tttcttcca atcccttata gctttggaga cgcccccata attccccagg gaaggaaact	7080
454	gttgtgtccca atcccccattt aagacaaattt gatcagtgtcttcc	7124

RAW SEQUENCE LISTING ERROR SUMMARY                    DATE: 06/18/2003  
PATENT APPLICATION: US/10/049,321                    TIME: 15:12:56

Input Set : A:\P02379US0.txt  
Output Set: N:\CRF4\06182003\J049321.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos. 3,4

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/049,321

DATE: 06/18/2003

TIME: 15:12:56

Input Set : A:\P02379US0.txt

Output Set: N:\CRF4\06182003\J049321.raw

L:52 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0